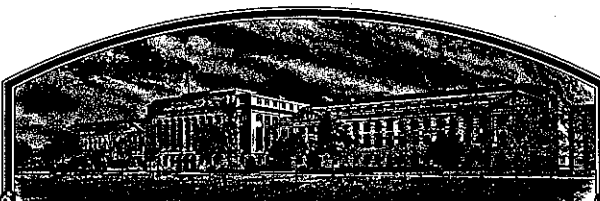


No.

8500173



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

**Jacques Seed Company**

Whereas, THERE HAS BEEN PRESENTED TO THE

**Secretary of Agriculture**

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (T. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'J-231'



In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D. C. this 30th day of April in the year of our Lord one thousand nine hundred and eighty-seven.

Attest:

*Kenneth A. Evans*  
Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

*Richard E. Lyng*  
Secretary of Agriculture

APPROVAL EXPIRES 4-30-85

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

FORM APPROVED: OMB NO. 0581-0055

## APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) Jacques Seed Company		2. TEMPORARY DESIGNATION 2009017		3. VARIETY NAME J-231	
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) 720 St. Croix Street Prescott, Wisconsin 54021		5. PHONE (Include area code)		FOR OFFICIAL USE ONLY PVPO NUMBER 8500173	
6. GENUS AND SPECIES NAME Glycine max (L) Merrill		7. FAMILY NAME (Botanical) Leguminosea		FILING DATE 6/25/85 TIME 2:30 <input type="checkbox"/> A.M. <input checked="" type="checkbox"/> P.M.	
8. KIND NAME Soybean		9. DATE OF DETERMINATION 10-84		AMOUNT FOR FILING \$ 1,800 DATE 6/25/85	
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation				FEE RECEIVED AMOUNT FOR CERTIFICATE \$ 200. <sup>00</sup> DATE March 5, 1987	
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Wisconsin				12. DATE OF INCORPORATION	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS Dennis F. Byron Jacques Seed Company Prescott, Wisconsin 54021 PHONE (Include area code): (715) 262-3223					
14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED					
a. <input checked="" type="checkbox"/> Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)					
b. <input checked="" type="checkbox"/> Exhibit B, Novelty Statement.					
c. <input checked="" type="checkbox"/> Exhibit C, Objective Description of Variety (Request form from Plant Variety Protection Office.)					
d. <input type="checkbox"/> Exhibit D, Additional Description of Variety.					
e. <input checked="" type="checkbox"/> Exhibit E, Statement of the Basis of Applicant's Ownership.					
15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act.) <input type="checkbox"/> Yes (If "Yes," answer items 16 and 17 below) <input checked="" type="checkbox"/> No					
16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input type="checkbox"/> Foundation <input type="checkbox"/> Registered <input type="checkbox"/> Certified		
18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.? <input type="checkbox"/> Yes (If "Yes," give date) <input checked="" type="checkbox"/> No					
19. HAS THE VARIETY BEEN RELEASED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES? <input type="checkbox"/> Yes (If "Yes," give names of countries and dates) <input checked="" type="checkbox"/> No					
20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable. The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.					
SIGNATURE OF APPLICANT Dennis F. Byron				DATE 7-15-85	
SIGNATURE OF APPLICANT				DATE	

## EXHIBIT A, ORIGIN AND BREEDING HISTORY OF THE VARIETY

- 1976 Corsoy was crossed with an F<sub>1</sub> plant of Hodgson x Calland.
- 1976-77 F<sub>1</sub> generation was grown in Belize. Seeds were bulked.
- 1977 F<sub>2</sub> generation was grown at Prescott, Wisconsin. One pod per plant was picked to form a composite for the F<sub>3</sub> generation.
- 1978 F<sub>3</sub> generation was grown at Prescott, Wisconsin. Fourteen plants were selected for advancement to the F<sub>4</sub>.
- 1979 F<sub>4</sub> generation was grown at Prescott, Wisconsin. Row 3 was selected and six plants were selected within row 3.
- 1980 F<sub>5</sub> generation was grown at New Richland, Minnesota. Row 6 was selected and seed was bulked for yield testing in 1981.
- 1981 Yield tests at three locations.
- 1982 Yield tests at three locations.
- 1983 Yield tests at three locations.
- 1984 Yield tests at nine locations.

J-231 is an F<sub>5</sub> derived line that was increased from five plants in 1981. Eight pounds of seed were grown in 1982 and one acre was grown in 1983. Ten acres were grown in 1984. All seed increase to this point has been conducted at Prescott, Wisconsin.

J-231 appears uniform and stable. Grey hila appear up to 0.5 percent and buff hila up to 0.3 percent.

#### ADDENDUM TO EXHIBIT A

J-231 has imperfect black hila. Environmental conditions may influence hila color expression ranging from buff to black. Yellow hila appear up to 2.0 percent, buff hila up to 1.0 percent and grey hila up to 1.0 percent. These variants were present in the original germplasm.

## EXHIBIT B, NOVELTY STATEMENT

J-231 is most similar to Corsoy 79. J-231 matures ~~two days later than~~ <sup>SAME TIME AS</sup> Corsoy 79 and has predominantly imperfect black hila compared with yellow for Corsoy 79.

WJS  
2/2/87

J-231 has improved lodging resistance versus Corsoy 79 (2.0 vs. 2.5). J-231 scores a 3 for iron chlorosis resistance versus 4 for Corsoy 79 and has darker pod coloration than Corsoy 79.



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EXHIBIT BUniversity of Illinois

## Maturity Dates

	Elwood 1981	Elwood 1982	Urbana 1982
Voris 295	10-01	9-29	9-16
Corsoy 79	9-23	9-19	9-06

Purdue University - 1981

	DeKalb Co.	Tippicanoe Co.	Randolph Co.	Posey Co.
Voris 295	10-01	10-01	10-14	9-09
Corsoy 79	9-24	9-20	10-10	8-30

Voris 295 averages 9 days later in maturity than Corsoy 79.

University of Minnesota - 1984

## Average of 3 locations

J-231 (E84100)	9-19
Corsoy 79	9-19

Iowa State University - 1984

## Average of 3 locations

J-231 (E84100)	9-26
Corsoy 79	9-20

Michigan State University - 1984

## Average of 4 locations

J-231 (E84100)	9-26
Corsoy 79	9-26

J-231 matures approximately the same as Corsoy 79.

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
LIVESTOCK, MEAT, GRAIN & SEED DIVISION  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MARYLAND 20705

EXHIBIT C  
(Soybean)

OBJECTIVE DESCRIPTION OF VARIETY  
SOYBEAN (*Glycine max* L.)

NAME OF APPLICANT(S) Jacques Seed Company	TEMPORARY DESIGNATION 2009017	VARIETY NAME J-231
ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code) 720 St. Croix Street Prescott, Wisconsin 54021		FOR OFFICIAL USE ONLY PVPO NUMBER 8500173

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g.,  ).

## 1. SEED SHAPE:



1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)  
3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)

2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)  
4 = Elongate Flattened (L/T ratio > 1.2; T/W > 1.2)

## 2. SEED COAT COLOR: (Mature Seed)

1 = Yellow

2 = Green

3 = Brown

4 = Black

5 = Other (Specify) \_\_\_\_\_

## 3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

1 = Dull ('Corsoy 79'; 'Braxton')

2 = Shiny ('Nebsoy'; 'Gasoy 17')

## 4. SEED SIZE: (Mature Seed)

Grams per 100 seeds

## 5. HILUM COLOR: (Mature Seed)

1 = Buff

2 = Yellow

3 = Brown

4 = Gray

5 = Imperfect Black

6 = Black

7 = Other (Specify) \_\_\_\_\_

## 6. COTYLEDON COLOR: (Mature Seed)

1 = Yellow

2 = Green

## 7. SEED PROTEIN PEROXIDASE ACTIVITY:

1 = Low

2 = High

## 8. SEED PROTEIN ELECTROPHORETIC BAND:

1 = Type A (SP1<sup>a</sup>)2 = Type B (SP1<sup>b</sup>)

## 9. HYPOCOTYL COLOR:

1 = Green only ('Evans'; 'Davis')

2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')

3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')

4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

## 10. LEAFLET SHAPE:

1 = Lanceolate

2 = Oval

3 = Ovate

4 = Other (Specify) \_\_\_\_\_

## 11. LEAFLET SIZE:

☐ 21 = Small ('Amsoy 71'; 'A5312')  
3 = Large ('Crawford'; 'Tracy')

2 = Medium ('Corsoy 79'; 'Gasoy 17')

## 12. LEAF COLOR:

☐ 21 = Light Green ('Weber'; 'York')  
3 = Dark Green ('Gnome'; 'Tracy')

2 = Medium Green ('Corsoy 79'; 'Braxton')

## 13. FLOWER COLOR:

☐ 2

1 = White      2 = Purple      3 = White with purple throat

## 14. POD COLOR:

☐ 2

1 = Tan      2 = Brown      3 = Black

## 15. PLANT PUBESCENCE COLOR:

☐ 1

1 = Gray      2 = Brown (Tawny)

## 16. PLANT TYPES:

☐ 21 = Slender ('Essex'; 'Amsoy 71')  
3 = Bushy ('Gnome'; 'Govan')

2 = Intermediate ('Amcor'; 'Braxton')

## 17. PLANT HABIT:

☐ 31 = Determinate ('Gnome'; 'Braxton')  
3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

2 = Semi-Determinate ('Will')

## 18. MATURITY GROUP:

☐ 0 ☐ 51 = 000      2 = 00      3 = 0      4 = I      5 = II      6 = III      7 = IV      8 = V  
9 = VI      10 = VII      11 = VIII      12 = IX      13 = X

## 19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

## BACTERIAL DISEASES:

☐ 0Bacterial Pustule (*Xanthomonas phaseoli* var. *sojensis*)☐ 0Bacterial Blight (*Pseudomonas glycinea*)☐ 0Wildfire (*Pseudomonas tabaci*)

## FUNGAL DISEASES:

☐ 0Brown Spot (*Septoria glycines*)Frogeye Leaf Spot (*Cercospora sojina*)☐ 0

Race 1

☐ 0

Race 2

☐ 0

Race 3

☐ 0

Race 4

☐ 0

Race 5

☐ 0

Other (Specify)

☐ 0Target Spot (*Corynespora cassicola*)☐ 0Downy Mildew (*Peronospora trifoliorum* var. *manshurica*)☐ 0Powdery Mildew (*Microsphaera diffusa*)☐ 0Brown Stem Rot (*Cephalosporium gregatum*)☐ 0Stem Canker (*Diaporthe phaseolorum* var. *caulivora*)



## 19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

## FUNGAL DISEASES: (Continued)

☐ 0 Pod and Stem Blight (*Diaporthe phaseolorum* var. *sojae*)☐ 0 Purple Seed Stain (*Cercospora kikuchii*)☐ 0 Rhizoctonia Root Rot (*Rhizoctonia solani*)Phytophthora Rot (*Phytophthora megasperma* var. *sojae*)☐ 2 Race 1 ☐ 2 Race 2 ☐ 1 Race 3 ☐ 1 Race 4 ☐ 1 Race 5 ☐ 1 Race 6 ☐ 1 Race 7☐ 1 Race 8 ☐ 1 Race 9 ☐ 1 Other (Specify) \_\_\_\_\_

## VIRAL DISEASES:

☐ 0 Bud Blight (Tobacco Ringspot Virus)☐ 0 Yellow Mosaic (Bean Yellow Mosaic Virus)☐ 0 Cowpea Mosaic (Cowpea Chlorotic Virus)☐ 0 Pod Mottle (Bean Pod Mottle Virus)☐ 0 Seed Mottle (Soybean Mosaic Virus)

## NEMATODE DISEASES:

Soybean Cyst Nematode (*Heterodera glycines*)☐ 1 Race 1 ☐ 1 Race 2 ☐ 1 Race 3 ☐ 1 Race 4 ☐ 0 Other (Specify) \_\_\_\_\_☐ 0 Lance Nematode (*Hoplolaimus Colonus*)☐ 0 Southern Root Knot Nematode (*Meloidogyne incognita*)☐ 0 Northern Root Knot Nematode (*Meloidogyne Hapla*)☐ 0 Peanut Root Knot Nematode (*Meloidogyne arenaria*)☐ 0 Reniform Nematode (*Rotylenchulus reniformis*)☐ 0 OTHER DISEASE NOT ON FORM (Specify): \_\_\_\_\_

## 20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

☐ 2 Iron Chlorosis on Calcareous Soil☐ 0 Other (Specify) \_\_\_\_\_

## 21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

☐ 0 Mexican Bean Beetle (*Epilachna varivestis*)☐ 0 Potato Leaf Hopper (*Empoasca fabae*)☐ 0 Other (Specify) \_\_\_\_\_

## 22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	Hodgson	Seed Coat Luster	Corsoy
Leaf Shape	Corsoy	Seed Size	Corsoy
Leaf Color	Hodgson	Seed Shape	Corsoy
Leaf Size	Corsoy	Seedling Pigmentation	Corsoy

## 23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/POD
				CM Width	CM Length	% Protein	% Oil		
J-231 Submitted 2009017	129	2.0	75	25.0	19.2			18.0	3
Name of Similar Variety Corsoy 79	127	2.5	85	23.3	16.5			16.0	3

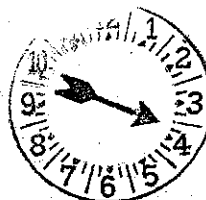
## PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A<sub>2</sub> in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.

RECEIVED

JUN 25 1985

U.S. DEPARTMENT



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## EXHIBIT E, STATEMENT OF THE BASIS OF APPLICANT'S OWNERSHIP

The applicant for plant variety protection is the employer of the breeder of J-231.

